Message

From: Robinson, Valois [Robinson.Valois@epa.gov]
Sent: 1/31/2020 12:35:15 AM
To: Chin, Lucita [Chin.Lucita@epa.gov]
Subject: Class V Fact Sheet info on well classification: Class I vs Class V

2.1 Injection Well Classification
The injection wells authorized under this permit are classified as Class V industrial wastewater injection wells. The proposed injection zone for injection wells DW No. 1 and DW No. 3 is the Minnelusa Formation, which overlies the Madison Formation, an underground source of drinking water (USDW). Typically, Class I radioactive waste injection wells are used for process wastewater disposal at uranium ISR sites because process wastewater at these types of facilities usually meets the definition of "radioactive waste" under 40 CFR § 144.3. Class I radioactive waste disposal wells are required to inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore per 40 CFR § 144.6(a)(3). Radioactive waste disposal above USDWs is classified as a Class IV well and is banned per 40 CFR § 144.13. Because the proposed Minnelusa injection zone for DW No. 1 and DW No. 3 is located above a USDW, these wells do not fit the regulatory definition of a Class I injection well. Therefore, in order to be able to inject in the Minnelusa, above USDWs, the permit requires Powertech to treat the injectate so that it does not fall under the definition of "radioactive waste." According to 40 CFR § 144.5(e) Class V injection wells are those not included in Class I, II, III, IV or VI. Therefore, DW No. 1 and DW No. 3 must be classified as Class V injection wells.

Because these two wells will be used as deep disposal wells, the Class V Area Permit contains the protective construction and monitoring requirements designed for Class I injection wells. However, because these wells are Class V wells, the Class V Area Permit contains permit limits requiring injectate constituent concentrations to be at or below radioactive waste standards set in 10 CFR Part 20, Appendix B, Table II, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1.

The proposed injection zone for injection wells DW No. 2 and DW No. 4 is the Deadwood Formation, which is expected to lie beneath all USDWs in the area. These two wells fit the regulatory definition of Class I wells found at 40 CFR § 144.6(a). Even if Powertech treats the injectate for these two wells so that injectate constituent concentrations would be at or below radioactive waste standards set in 10 CFR Part 20, Appendix B, Table II, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1, these wells would still meet the definition of Class I other industrial well found at 40 CFR § 144.6(a)(2). South Dakota regulation 74:55:02:02 prohibits Class I injection wells in the State. When the EPA informed Powertech that the DW No. 2 and DW No. 4 wells proposed for injection into Deadwood Formation are classified as Class I wells under UIC regulation 40 CFR § 144.6(a)(2), Powertech submitted a letter to the EPA withdrawing the request for authorization for construction and operation of wells injecting into the Deadwood Formation. Because there is no longer an active application for injection into the Deadwood Formation, there is no agency action related to injection into this formation.

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